INVENTOR: RICHARDSON
TITLE: Microprocessor Controlled Quartz Analog Clock Movement

Abstract

A synchronous analog clock movement is provided for use in a secondary clock of a master-slave clock system. The movement keeps time independent of the master clock through a primary time base and a clock counter of a microprocessor. The movement is capable of receiving a time-correction signal from the master clock. The microprocessor controls a quartz movement motor. The microprocessor receives and recognizes the time-correction signal from the master clock, and then performs the time-correction process of advancing the movement to the correct position. The processor can keep time during a power failure through the use of a reserve power supply and secondary time base. Upon restoration of power, the processor will advance the quartz movement to the correct position. Optical sensors are connected to the microprocessor for determining the position of the hour and minute hands, or associated gearing, of the quartz movement.

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